

WHAT IS CLAIMED IS:

1. An optical engine of a projection television for enlarging an image produced in an image producer and projecting the enlarged image on a screen, the optical engine comprising:

a light generator;

a mirror device for reflecting illumination emitted from the light generator, thereby changing a path of the illumination, wherein a reflection angle of the illumination can be adjusted; and

a projection apparatus for enlarging and projecting the image produced in the image producer on the screen by reflecting the image to an incident illumination from the mirror device,

wherein the path of the illumination is aligned to correspond for the whole image produced in the image producer to be projected on the screen by adjusting the mirror device.

2. The optical engine of a projection television according to claim 1, wherein the mirror device comprises:

a case having a shape of a box fastened to the projection apparatus;

screw portions formed at three corners of a quadrangle defining an upper portion of the case;

a mirror unit with a mirror fastened therein for reflecting the illumination emitted from the light generator, the mirror unit comprising holes corresponding to the screw portions;

three compression springs disposed between the screw portions of the case and the holes of the mirroring unit respectively; and

three screws assembled in the screw portions of the case through the holes and the compression springs of the mirroring unit,

wherein a reflection angle of the mirror is adjusted by turning the three screws.

3. The optical engine of a projection television according to claim 2, wherein the mirror unit comprises:

a mirror holder receiving the mirror and having the holes at the three corners corresponding to the screw portions of the case; and

a mirror fastening bracket for fastening the mirror to the mirror holder.

4. The optical engine of a projection television according to claim 1, wherein the image producer is a Digital Micromirror Device (DMD).

5. An optical engine of a projection television for enlarging an image and projecting the enlarged image on a screen, the optical engine comprising:

a Digital Micromirror Device (DMD) for projecting an image;

a light source disposed at one side of the DMD;

a lens system for condensing illumination emitted from the light source;

a first mirror for changing a path of the illumination from the lens system;

a lens for condensing the illumination from the first mirror;

a mirror device with a reflection angle adjusted by turning a screw, for reflecting the illumination from the lens onto the DMD;

a prism disposed on a front surface of the DMD for causing the illumination from the mirror device to be reflected onto the DMD; and

a projection system for enlarging an image and the illumination from the prism and projecting the enlarged image and the illumination onto the screen.

6. The optical engine of a projection television according to claim 5, wherein the mirror device comprises:

a case having a shape of a box fastened to the projection apparatus;

screw portions formed at three corners of a quadrangle defining an upper portion of the case;

a mirror unit with a mirror fastened therein for reflecting the illumination emitted from the light source, the mirror unit comprising holes corresponding to the screw portions;

three compression springs disposed between the screw portions of the case and the holes of the mirror unit, respectively; and

three screws assembled in the screw portions of the case through the holes and the compression springs of the mirror unit,

wherein a reflection angle of the mirror is adjusted by turning the three screws.

7. The optical engine of a projection television according to claim 6, wherein the mirror unit comprises:

a mirror holder receiving the mirror and having the holes at the three corners corresponding to the screw portions of the case; and

a mirror fastening bracket for fastening the mirror to the mirror holder.

8. The optical engine of a projection television according to claim 5, further comprising a color filter disposed between the light source and the lens system.

9. A projection television comprising:

a screen;

a body for securing the screen;

a Digital Micromirror Device (DMD) disposed at a lower part of the body for producing a predetermined image;

a light source disposed at one side of the DMD;

a lens system for condensing illumination emitted from the light source;

a first mirror for changing a path of the illumination from the lens system;

a lens for condensing the illumination from the first mirror;

a mirror device with a reflection angle adjusted by turning a screw, for reflecting the illumination from the lens onto the DMD;

a prism disposed on a front surface of the DMD for causing the illumination from the mirror device to be reflected onto the DMD;

a projection system for enlarging an image and the illumination from the prism and projecting the enlarged image and the illumination onto the screen; and

a second mirror disposed on the body behind the screen for reflecting an image and the illumination from the projection system.

10. The projection television according to claim 9, wherein the mirror device comprises:

a case having a shape of a box fastened to the projection apparatus;

screw portions formed at three corners of a quadrangle defining an upper portion of the case;

a mirror unit with a mirror fastened therein for reflecting the illumination emitted from the light source, the mirror unit comprising holes corresponding to the screw portions;

three compression springs disposed between the screw portions of the case and the holes of the mirror unit, respectively; and

three screws assembled in the screw portions of the case through the holes and the compression springs of the mirror unit,

wherein a reflection angle of the mirror is adjusted by turning the three screws.